

### WHO DIES OF WHAT IN THE EUROPEAN COMMUNITY?

Of the 3.3 million deaths that occurred in 1990<sup>(1)</sup> in the European Community<sup>(2)</sup>, almost half (1.4 million) were due to diseases of the circulatory system and a quarter (0.8 million) to malignant tumours. However, the causes of mortality vary greatly depending on age, sex and region. Thus, violent deaths (accidents and suicides) are preponderant amongst young males. The incidence of death from tumours increases with age, accounting for half of all deaths of women aged between 45 and 54. Diseases of the circulatory system are responsible for more deaths in Ireland, Portugal and Luxembourg than in the other member States.

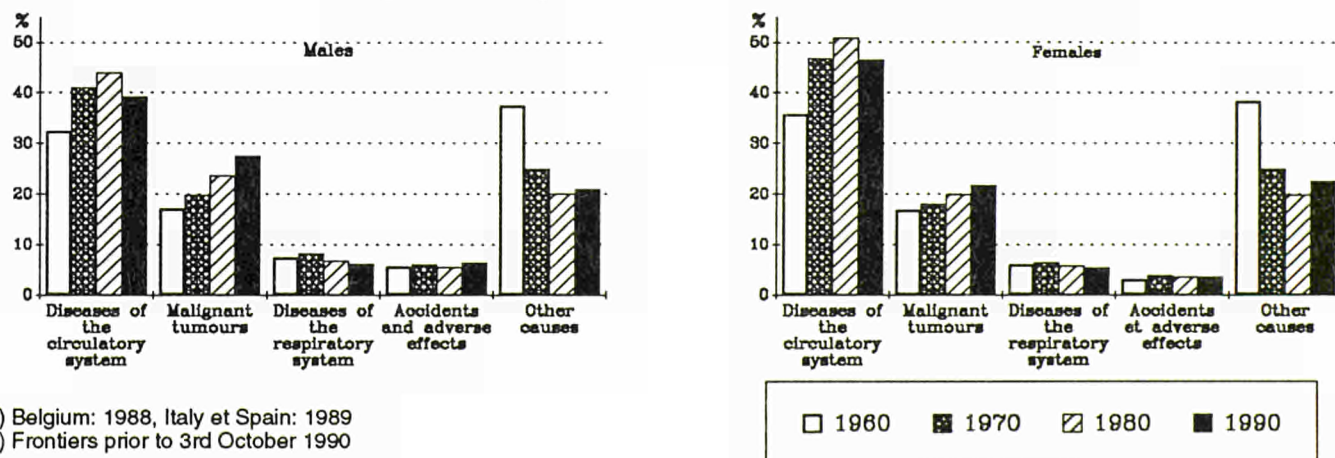
### CAUSES OF MORTALITY OVER THE PAST 30 YEARS

In 1960, 34% of the 2.9 million deaths that occurred were due to diseases of the circulatory system, and 17% to tumours. During the 60s and 70s, these two causes of death increased proportionally. However, during the 80s, diseases of the circulatory system decreased perceptibly, in marked contrast to cancer, which rose steadily. The "other causes" category increased slightly not only due to the decrease of certain diseases but also as a result of diseases such as Aids and Parkinson's disease, which became more widespread during the 80s.

During the period under review, diseases of the circulatory system were a more common cause of mortality amongst women than men. By contrast, tumours, respiratory diseases and accidents were more common amongst men.

Differences in the distribution of the causes of death over the past 30 years can be attributed in particular to medical advances, improved medical reporting of the causes of death, and to the age structure (ageing of the population).

Figure 1 : Temporal distribution of causes - EUR12



(1) Belgium: 1988, Italy et Spain: 1989

(2) Frontiers prior to 3rd October 1990

Figure 2 : Causes of deaths by age group - EUR12 - 1989<sup>(1)</sup>

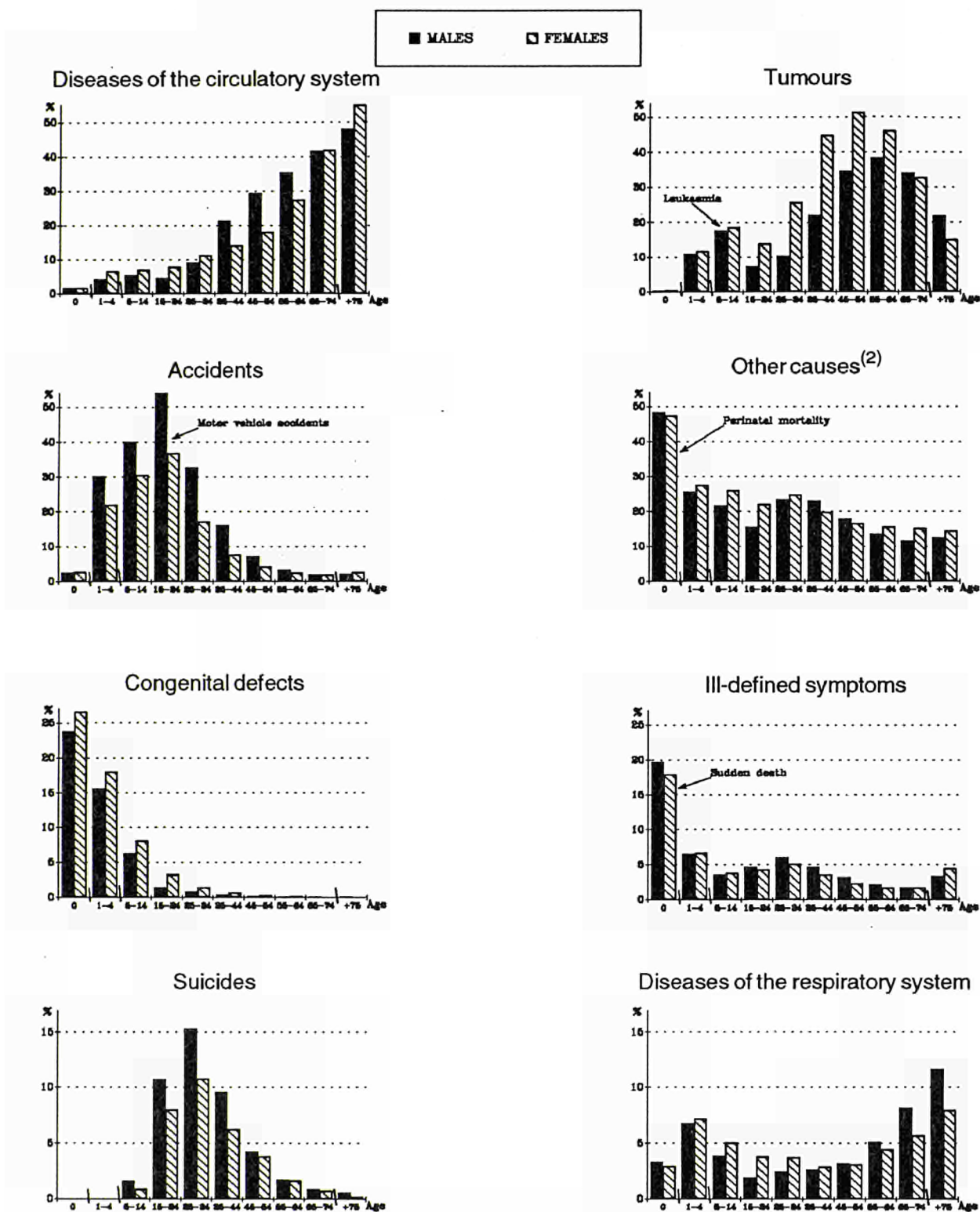


Table 1 : Total number of deaths - EUR12 - 1989<sup>(1)</sup>

SEX \ AGE	0	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	+ 75	Total
MALES	19 107	3 713	5 218	24 799	30 087	46 155	105 813	248 325	387 997	764 941	1 636 155
FEMALES	13 901	2 771	2 427	8 599	12 248	24 565	53 511	125 248	265 572	1 105 947	1 614 789

Source : WHO

(1) Belgium : 1986; Spain : 1987; Italy : 1988

(2) Infectious and parasitic diseases, diseases of the digestive system, of the genito-urinary system, of the nervous system, of the blood, skin, etc.

## CAUSES OF DEATH BY AGE

### PERINATAL DISEASES AMONGST INFANTS

The infant mortality rate for the 3.9 million births observed in the European Community in 1989 was 8.2 per 1 000 births.

The three main causes of infant mortality were:

- perinatal diseases (including intrauterine hypoxia and asphyxia neonatorum) (41% of infant mortalities)
- congenital defects (especially of the heart and circulatory system) (24%)
- ill-defined symptoms and morbid states (including cot death syndrome) (20%).

Diseases of the respiratory system and accidents are responsible for a very low proportion of deaths.

### VARIETY OF CAUSES AMONGST 1-4 YEAR-OLDS

Causes of death vary greatly in the 1-4 age group.

Accidents are the primary cause of death, followed by congenital defects and tumours.

However, the percentage of deaths attributed to each cause vary greatly from one country to another.

For example, accidents account for approximately 20% of the total of deaths in Belgium, Italy and the United Kingdom and approximately 40% in Luxembourg and Greece.

In Portugal and Spain, infectious and parasitic diseases are more prevalent than tumours, unlike in the other Member States, where they are virtually non-existent.

Most of the deaths by accidents amongst children aged 1-4 are caused by motor vehicle traffic accidents on highways, suffocation and obstructions, and falls.

### ACCIDENTS AND TUMOURS MOST COMMON AMONGST 5-14 YEAR-OLDS

In the 5-14 age group, accidents (mainly road) and tumours (particularly leukaemia) are responsible for more than half of all deaths. Congenital defects (a less common cause of death than in the preceding age group) are ranked third, followed by diseases of the circulatory system and diseases of the respiratory system.

### EXCESS MALE MORTALITY DUE TO ACCIDENTS AMONGST 15-24 YEAR-OLDS

Excess male mortality for the 15-24 years olds is characteristic for all countries of the European Community (see table 1).

Of the 24 799 deaths recorded in 1989 for European males aged 15-24, 54% were due to accidents and 11% to suicide, the second most common cause of death amongst males of this age.

Accidents are also the prime cause of death amongst women (36%), but to a lesser extent than amongst men, followed by tumours (14%).

Disparities for this age group are more pronounced between the sexes than between countries.

### STEADY INCREASE IN TUMOURS AMONGST THE 25-64 YEAR-OLDS

The 24-34 year-old population appears to constitute a transitional group:

- the most common causes of death amongst men are accidents (33%), suicide (15%) and tumours (10%). This age group has the highest suicide rate;

- amongst women, tumours are the prime cause of death (26%), followed by accidents (17%). Suicide (11%) is virtually level with diseases of the circulatory system (11%).

Amongst 35-44 year-olds, almost half of all female deaths are due to cancer. Amongst men, however, accidents, tumours and diseases of the circulatory system account for equal shares.

Mortality amongst the 45-64 year-olds is largely due to diseases of the circulatory system and tumours.

### INCREASE IN HEART DISEASE AND CEREBROVASCULAR DISEASE IN THE OVER-65s

Tumours and diseases of the circulatory system are the primary cause of death amongst both men and women over 65. Accidents account for much fewer deaths than in the preceding age groups, although the absolute level is not negligible at 58 451 deaths.

Of tumours, breast cancer accounts for the greatest number of deaths amongst women, and lung cancer amongst men.

As for diseases of the circulatory system, acute myocardial infarctions and other ischaemic myocardopathies rank ahead of cerebrovascular disease for both men and women.



**Table 2 : Age-standardized mortality rate by cause (per 100 000 inhabitants) - Last available year**

			Total	Diseases of the circulatory system			Malignant tumours			
				Total	Ischaemic heart disease	Cerebro-vascular disease	Total	of stomach, intestine, and rectum	of the trachea, bronchus and lung	of the breast
B	M F	1986	1157.6	432.6	162.3	92.3	313.8	20.2	115.7	-
			677.2	273.9	70.7	76.5	164.6	9.5	11.1	38.1
DK	M F	1990	1106.0	472.8	293.1	81.8	278.7	12.2	78.4	-
			698.9	280.3	148.0	65.5	201.4	5.9	34.3	38.5
D	M F	1989	1076.9	484.1	223.2	100.6	280.0	23.4	72.9	-
			634.8	300.5	103.6	79.2	166.6	12.1	11.8	32.9
GR	M F	1989	922.8	432.4	140.0	135.7	218.1	14.4	75.3	-
			632.1	339.8	59.5	142.1	115.9	7.8	9.9	21.6
E	M F	1987	946.2	355.1	109.3	108.0	243.7	24.0	62.8	-
			565.6	260.2	48.1	93.4	119.3	11.7	5.8	23.2
F	M F	1989	967.6	279.7	95.1	70.5	303.1	14.1	69.0	-
			506.1	166.8	40.9	50.8	132.0	5.8	7.5	28.1
IRL	M F	1989	1197.7	562.1	351.0	95.6	266.1	17.7	71.6	-
			769.3	348.9	174.9	84.3	196.0	9.3	29.8	42.9
I	M F	1988	1010.7	401.5	139.5	117.9	292.5	29.2	87.4	-
			592.5	267.5	65.0	91.4	184.4	14.2	10.8	29.5
L	M F	1989	1184.4	526.4	187.4	151.4	298.1	20.2	94.8	-
			704.7	336.7	80.7	127.7	165.8	11.3	14.2	33.2
NL	M F	1989	1020.9	400.3	204.6	76.5	303.8	20.7	109.8	-
			581.2	221.1	82.9	61.6	164.4	8.2	14.9	39.0
P	M F	1990	1228.0	485.7	119.2	248.5	228.0	40.0	40.2	-
			746.7	346.7	60.2	193.6	129.8	18.8	6.6	25.7
UK	M F	1990	1041.7	468.8	306.2	92.7	276.0	19.1	87.5	-
			659.1	281.1	145.4	84.0	185.5	8.1	30.7	40.3

Source : WHO

## MORTALITY BY CAUSE OF DEATH AND COUNTRY

### INFECTIOUS AND PARASITIC DISEASES

This disease is a more common cause of mortality in France, Spain and Portugal.

### DISEASES OF THE DIGESTIVE SYSTEM

The mortality rate by cirrhosis of the liver is considerably higher in Portugal and Luxembourg and relatively low in the United-Kingdom.

### DISEASES OF THE RESPIRATORY SYSTEM

Belgium and Denmark have higher mortality rates than the other member States for pneumonia, bronchitis and asthma. Levels are lowest in Greece.

Excess male mortality varies from 1.73 in Denmark to 3.09 in Belgium.

### VIOLENT DEATHS

Road accidents account for approximately the same number of deaths as suicide in the United Kingdom, the Netherlands and Luxembourg. By contrast, suicide is just ahead of accidents in France, Germany, Denmark and Belgium. Ireland, Portugal, Spain and Greece rec-

ord fewer suicides than road accident fatalities.

More men than women commit suicide. The ratio of male to female suicides varies from 1.74 in the Netherlands to 3.49 in the United-Kingdom, although female suicide is perhaps under estimated in statistics.

The index of excess male mortality due to road accidents varies from 2.35 in Denmark to 4.40 in Luxembourg.

### MALIGNANT TUMOURS

Relatively clear differences emerge between countries according to sex and location of tumour.

The incidence of breast cancer is particularly high in Ireland and in the United Kingdom, and low in Greece, Portugal and Spain.

Portugal and Italy have much higher incidences of cancer of the digestive system than Denmark and France.

Mortality from lung cancer is very high in the Netherlands and Belgium amongst men. There is a striking rate of excess male mortality due to lung cancer in Spain, Belgium, France and Italy compared with the other european community countries.

Table 2 (continued)

Diseases of the respiratory system		Diseases of the digestive system		Infectious and parasitic diseases	Injury and poisoning					
Total	Pneumonia, bronchitis, emphysema, asthma	Total	Chronic liver disease and cirrhosis		Total	Motor vehicle accidents	Suicide and self-inflicted injury			
120.7	48.5	40.9	16.8	8.6	87.7	29.7	30.1	1986	M	B
39.1	12.5	26.1	9.0	5.2	42.4	9.9	13.3		F	
86.1	55.0	40.2	19.2	9.9	81.3	15.5	30.7	1990	M	DK
49.8	29.4	25.0	7.8	4.1	43.4	6.6	14.8		F	
77.7	42.6	54.1	29.9	7.9	61.4	16.8	22.0	1989	M	D
28.9	12.2	29.7	12.5	4.9	27.4	5.8	8.2		F	
49.1	4.1	28.7	11.8	6.2	66.7	30.8	5.5	1989	M	GR
30.7	2.4	14.9	4.3	4.3	26.0	8.9	1.9		F	
94.4	16.2	63.4	31.9	10.7	67.9	26.1	11.0	1987	M	E
38.7	6.1	29.2	10.9	6.0	21.7	7.8	3.7		F	
64.4	15.9	54.2	27.5	11.5	103.5	26.0	29.9	1989	M	F
28.8	6.6	27.5	10.6	6.8	45.3	9.0	10.8		F	
172.2	29.2	30.0	65.0	7.2	65.0	19.5	13.4	1989	M	IRL
97.3	14.0	22.5	25.6	5.3	25.6	6.8	4.2		F	
77.8	43.7	61.5	62.2	4.6	62.2	22.9	10.9	1988	M	I
28.5	12.0	29.5	27.0	2.4	27.0	6.4	3.8		F	
85.1	28.7	66.6	90.5	6.0	90.5	28.6	28.0	1989	M	L
34.8	7.3	33.7	32.9	2.8	32.9	6.5	9.2		F	
98.0	35.9	30.9	45.4	5.4	45.4	12.8	12.9	1989	M	NL
35.1	7.6	24.0	25.2	4.2	25.2	5.4	7.4		F	
101.4	22.6	68.3	104.8	11.5	104.8	44.6	13.9	1990	M	P
45.8	8.1	26.2	32.3	4.8	32.3	11.1	4.1		F	
117.6	19.4	30.3	7.2	4.9	47.7	13.6	12.2	1990	M	UK
64.9	8.5	24.1	4.9	3.2	19.3	4.7	3.5		F	

## DISEASES OF THE CIRCULATORY SYSTEM

Slightly more men than women die from diseases of the circulatory system.

The highest mortality rates for these diseases are found in Luxembourg and Ireland, and the lowest in Spain and France.

The pattern is not, however, the same for ischaemic heart disease or cerebrovascular disease.

## RISK FACTORS

Territorial variations in mortality are the result of several factors of a socio-economic, biological, cultural and, more generally, ecological nature.

Indeed, life-style and the environment, for example nutrition (excess consumption of animal fat), tobacco and alcohol consumption, atmospheric pollution or the

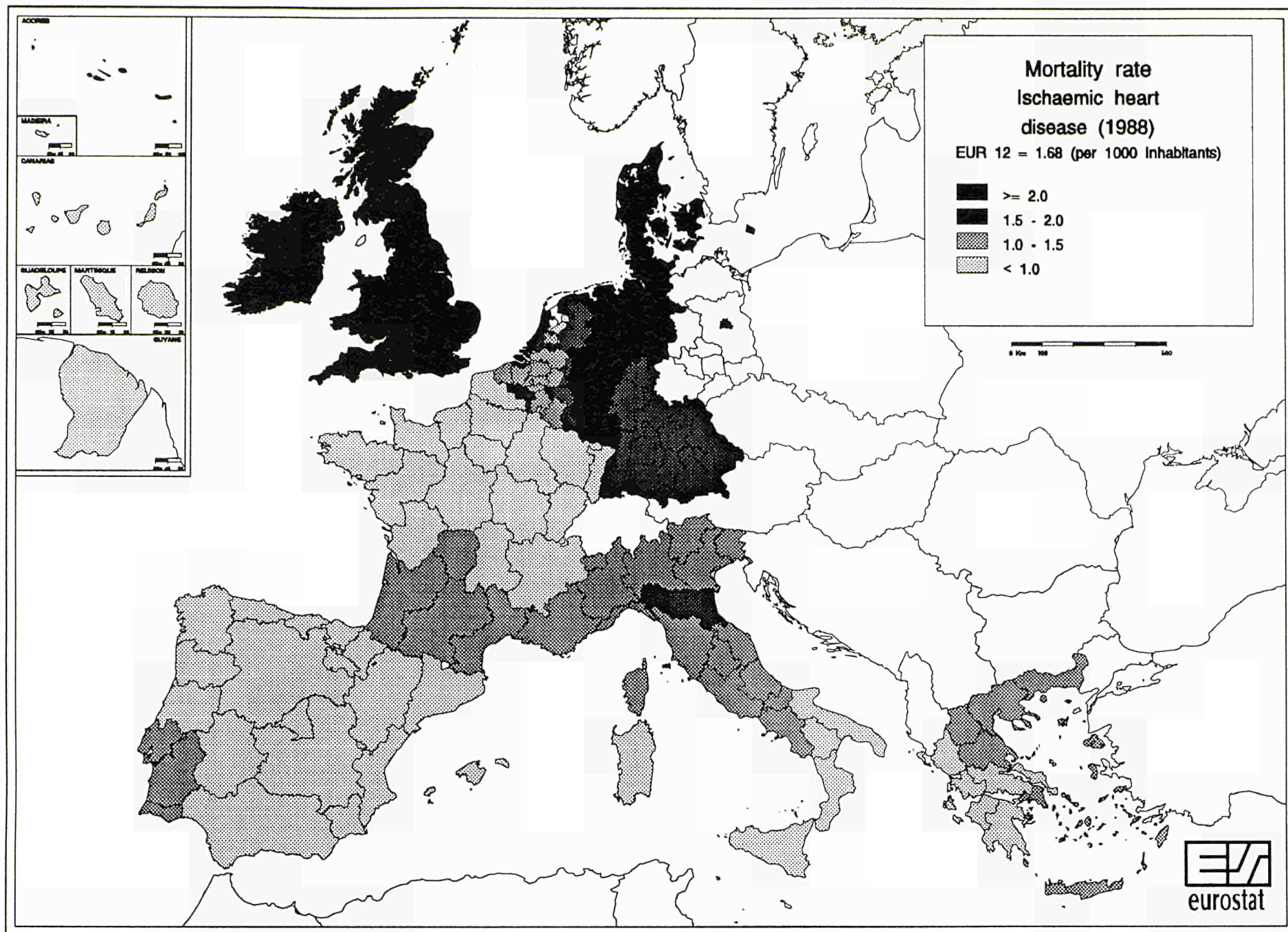
pressure generated by social environments, have a negative influence on the health of the population.

Other aspects, such as campaigns against cancer, precautionary measures within the sphere of road safety, improvement of hygiene and sanitation, a better emergency health service and improved eating habits (a balanced diet) contribute towards the decrease of certain causes of death.

## REGIONAL NOTE

The following maps and table show mortality rates for selected causes of death at regional level.

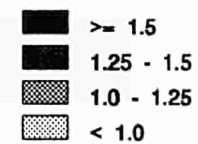
The differences in mortality can be explained by the significant element of randomness introduced by the small populations of certain regions, and to the effect of the population's age structure.





# **Mortality rate Cerebrovascular disease (1988)**

EUR 12 = 1.26 (per 1000 inhabitants)



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**Table 3 : Mortality rate by cause (per 100 000 inhabitants) - 1988**

	Total	Malignant tumours			Diabetes mellitus	Pneumonia, bronchitis, emphysema, asthma	Chronic liver disease and cirrhosis	Motor vehicle accidents	Suicide and self-inflicted injury	Homicide
		of the stomach, intestine, and rectum	of the trachea, bronchus and lung	of the breast and cervix uteri						
<b>EUR12</b>	<b>995.7</b>	<b>48.9</b>	<b>48.8</b>	<b>22.2</b>	<b>19.2</b>	<b>47.3</b>	<b>18.0</b>	<b>14.9</b>	<b>11.2</b>	<b>1.2</b>
<b>BELGIQUE-BELGIE<sup>1</sup></b>	<b>1068.1</b>	<b>49.7</b>	<b>65.4</b>	<b>25.7</b>	<b>19.9</b>	<b>49.8</b>	<b>12.5</b>	<b>19.6</b>	<b>22.7</b>	<b>1.6</b>
VLAAMS GEWEST	978.4	53.0	64.0	25.0	19.3	46.2	8.5	19.2	19.4	1.0
REGION WALLONNE	1175.4	43.9	68.6	24.4	20.9	52.8	16.8	22.1	27.3	2.0
BRUXELLES-BRUSSEL	1239.1	50.2	63.3	33.5	19.8	60.7	21.1	13.8	26.6	3.7
ANTWERPEN	993.3	50.7	67.1	25.5	16.6	38.9	6.6	18.4	17.1	0.8
BRABANT	1087.0	46.5	62.3	29.4	20.4	47.6	14.8	15.7	24.6	2.4
HAIGNAUT	1236.9	45.8	68.6	25.7	20.6	51.1	21.1	17.8	24.9	2.0
LIEGE	1182.3	47.5	69.1	23.9	26.2	67.6	14.6	22.5	32.7	1.9
LIMBURG	717.4	39.1	57.4	16.6	17.0	21.2	4.2	23.8	16.3	1.1
LUXEMBOURG	1129.6	35.8	71.2	20.4	17.3	26.1	10.6	35.0	22.6	1.3
NAMUR	1157.1	39.6	69.0	25.8	16.6	52.6	16.6	27.5	28.5	2.4
OOST-VLAANDEREN	1084.8	57.0	69.8	26.5	22.7	80.1	12.8	19.9	22.0	1.0
WEST-VLAANDEREN	1007.5	66.6	59.8	26.1	17.3	38.3	8.0	19.6	18.0	0.9
<b>DANMARK</b>	<b>1149.9</b>	<b>83.2</b>	<b>67.8</b>	<b>:</b>	<b>:</b>	<b>71.1</b>	<b>:</b>	<b>14.6</b>	<b>26.0</b>	<b>:</b>
<b>BR DEUTSCHLAND</b>	<b>1118.9</b>	<b>62.6</b>	<b>44.7</b>	<b>26.9</b>	<b>18.1</b>	<b>52.2</b>	<b>22.9</b>	<b>12.9</b>	<b>17.6</b>	<b>1.1</b>
BADEN-WÜRTTEMBERG	985.5	55.1	32.2	23.8	9.8	55.4	22.3	12.8	19.2	0.9
STUTTGART	958.4	54.0	29.1	24.2	11.2	52.4	22.3	12.8	20.4	1.0
KARLSRUHE	1061.3	58.9	38.1	25.4	8.5	47.7	26.5	10.6	17.6	1.0
FREIBURG	981.4	54.7	35.2	20.9	9.3	72.2	20.7	13.9	20.4	0.9
TÜBINGEN	933.5	52.3	26.3	24.1	9.3	54.0	17.8	14.8	17.5	0.9
BAYERN	1077.8	65.0	34.0	24.8	24.9	48.6	21.3	17.1	18.5	1.0
OBERBAYERN	1008.4	59.5	33.3	25.9	21.0	44.6	20.1	17.0	19.9	1.0
NIEDERBAYERN	1088.1	71.6	34.2	23.7	23.7	48.6	18.1	24.7	19.3	0.9
OBERPFALZ	1102.5	73.5	38.5	24.7	25.6	49.8	19.6	20.5	16.5	0.9
OBERFRANKEN	1212.8	75.6	37.0	26.1	33.6	58.4	23.6	16.0	20.4	0.5
MITTELFRANKEN	1147.7	67.1	35.1	27.4	26.7	47.4	27.0	11.1	20.7	1.2
UNTERFRANKEN	1038.0	63.1	31.0	20.7	26.6	53.0	20.7	16.0	14.0	1.4
SCHWABEN	1090.5	60.1	31.9	22.6	24.7	48.6	20.3	17.9	16.0	0.6
BERLIN	1466.5	71.1	56.8	35.2	42.6	52.0	34.4	8.4	23.0	2.5
BREMEN	1319.3	74.4	55.6	32.6	35.1	51.8	30.1	9.7	27.7	1.8
HAMBURG	1326.4	69.8	62.7	32.1	16.9	79.1	28.2	8.7	23.4	2.8
HESSSEN	1120.5	61.0	42.7	28.3	22.1	49.5	22.9	13.1	17.1	1.4
DARMSTADT	1081.3	61.5	44.0	28.7	21.5	47.7	23.6	11.1	17.1	1.7
GIEßEN	1119.9	58.2	39.2	27.7	24.8	48.2	21.2	14.8	17.4	0.9
KASSEL	1236.6	63.7	41.7	27.6	21.8	56.5	22.3	17.7	16.9	0.7
NIEDERSACHSEN	1156.3	66.0	44.7	26.0	12.5	59.7	18.4	15.6	18.5	0.9
BRAUNSCHWEIG	1227.9	67.3	47.9	27.8	14.2	60.4	18.4	12.0	17.3	0.5
HANNOVER	1250.8	69.7	47.1	27.7	14.0	61.0	24.2	14.6	19.4	1.3
LÜNEBURG	1147.6	66.9	45.8	24.4	12.0	56.7	17.7	20.3	19.7	0.8
WESER-EMS	1019.9	61.0	39.3	24.3	10.3	60.0	13.4	16.0	17.9	0.9
NORDRHEIN-WESTFALEN	1113.0	61.4	54.1	27.9	16.8	50.5	24.1	10.1	13.9	0.7
DÜSSELDORF	1162.4	64.6	61.5	30.0	17.3	52.6	26.6	8.1	13.6	0.8
KÖLN	1047.9	53.0	54.4	27.2	15.9	43.9	22.0	10.1	13.9	0.9
MÜNSTER	1026.0	57.4	47.9	26.6	16.9	48.9	21.8	12.1	12.0	0.3
DETMOLD	1121.6	65.2	42.5	24.6	15.6	54.6	18.3	13.8	16.2	0.2
ARNSBERG	1166.7	66.6	53.3	28.4	17.7	53.6	27.0	9.6	14.3	0.7
RHEINLAND-PFALZ	1149.9	65.0	48.5	26.9	10.0	44.1	24.0	12.4	17.4	1.2
KOBLENZ	1196.2	64.1	52.5	28.0	10.4	47.7	19.6	:	17.1	:
TRIER	1119.6	66.7	52.5	25.4	8.0	44.0	21.2	:	16.5	:
RHEINHESSEN-PFALZ	1123.2	65.3	44.5	26.5	10.2	41.6	28.0	:	18.9	:
SAARLAND	1175.8	59.7	58.5	25.9	14.2	55.1	25.1	10.2	15.2	1.5
SCHLESWIG-HOLSTEIN	1188.6	64.8	43.3	29.1	25.2	44.9	20.3	13.8	20.9	1.3

1 Belgium: 1987



**Table 3 : Mortality rate by cause (per 100 000 inhabitants) - 1988 (continued)**

	Total	Malignant tumours			Diabetes mellitus	Pneu- monia, bronchitis, emphy- sema, asthma	Chronic liver disease and cirrhosis	Motor vehicle accidents	Suicide and self-inflicted injury	Homicide
		of the stomach, intestine, and rectum	of the trachea, bronchus and lung	of the breast and cervix uteri						
<b>ELLADA</b>	<b>914.9</b>	<b>24.4</b>	<b>44.1</b>	<b>13.6</b>	<b>8.8</b>	<b>13.4</b>	<b>8.6</b>	<b>18.4</b>	<b>4.0</b>	<b>1.1</b>
VOREIA ELLADA	894.3	30.5	44.6	11.6	7.8	11.4	8.6	20.3	4.5	0.7
ANATOLIKI MAKEONIA, THRAKI	1020.1	33.9	53.5	11.0	7.9	8.4	6.5	14.9	6.8	0.9
KENTRIKI MAKEDONIA	840.2	30.2	43.0	12.8	7.5	11.6	8.3	21.6	3.9	0.7
DYTIKI MAKEDONIA	920.9	35.7	33.9	7.9	7.5	10.6	10.3	19.9	4.5	:
THESSALIA	911.3	26.2	45.5	10.7	8.5	13.5	10.3	21.8	4.2	1.0
KENTRIKI ELLADA	1007.4	21.4	42.4	10.9	8.6	18.2	9.3	19.3	4.4	1.1
IPEIROS	845.2	17.9	43.3	8.4	5.7	12.2	4.8	17.3	4.2	0.9
IONIA NISIA	1228.7	27.1	60.5	13.3	12.7	30.8	9.6	11.2	3.7	1.1
DYTIKI ELLADA	943.4	20.1	42.5	9.6	8.6	17.9	9.7	19.1	3.5	1.0
STEREA ELLADA	991.3	20.8	38.2	11.1	7.8	12.2	9.7	20.7	4.2	1.4
PELOPONNISOS	1117.5	23.8	40.1	12.7	9.7	23.8	10.7	22.1	6.0	1.0
ATTIKI	843.6	22.2	45.1	18.1	9.6	11.5	7.7	17.9	2.9	1.4
NISIA	1013.0	19.3	43.1	10.7	9.9	15.5	10.6	11.9	5.0	0.8
VOREIO AIGAIO	1373.5	25.9	61.9	9.6	20.8	27.9	8.6	5.6	5.6	1.0
NOTIO AIGAIO	879.7	18.0	39.2	11.6	6.0	10.8	8.4	12.8	1.2	0.8
KRITI	941.2	17.5	38.0	10.6	7.6	13.1	12.4	13.9	6.7	0.8
<b>ESPAÑA</b>	<b>823.1</b>	<b>37.7</b>	<b>33.9</b>	<b>17.1</b>	<b>22.9</b>	<b>28.7</b>	<b>20.5</b>	<b>19.1</b>	<b>7.6</b>	<b>0.9</b>
NOROESTE	935.7	45.4	40.7	18.8	20.7	30.6	22.3	23.0	11.5	1.4
GALICIA	938.0	45.5	37.2	18.9	18.5	30.5	22.1	23.9	11.2	1.4
ASTURIAS	964.0	47.1	48.2	20.2	26.6	27.8	24.5	23.5	14.8	1.9
CANTABRIA	862.5	41.0	42.9	15.0	19.9	37.4	18.6	16.7	5.7	0.4
NORESTE	809.0	43.1	30.7	18.5	19.1	30.1	19.0	18.2	6.5	1.3
PAIS VASCO	735.1	40.7	30.7	17.4	16.0	25.1	22.5	17.4	5.8	1.2
NAVARRA	783.6	43.8	26.3	18.2	16.1	32.7	12.9	24.2	5.6	1.7
RIOJA	903.9	44.4	31.4	14.9	18.8	26.0	16.5	27.2	11.1	3.4
ARAGÓN	928.6	46.6	32.5	21.4	25.9	38.7	15.8	15.1	7.1	0.7
MADRID	675.9	31.8	30.3	16.1	17.7	26.6	18.6	13.4	3.5	0.5
CENTRO	886.5	47.6	31.6	15.3	24.0	30.3	15.3	17.2	8.6	0.5
CASTILLA-LEÓN	881.2	54.8	29.7	15.9	21.3	31.5	15.8	18.7	9.6	0.3
CASTILLA-LA MANCHA	886.4	40.1	28.3	13.5	25.7	31.0	13.5	16.4	6.8	0.4
EXTREMADURA	898.9	42.2	41.0	16.5	27.7	26.8	16.9	14.7	8.8	1.1
ESTE	849.1	40.2	36.4	19.1	23.1	27.1	24.2	20.8	6.7	0.9
CATALUÑA	818.6	40.6	38.2	19.7	21.4	26.1	24.5	21.4	6.6	0.9
COMUNIDAD VALENCIANA	885.1	40.2	33.0	17.3	26.3	29.0	24.2	20.5	6.9	1.1
BALEARES	917.9	36.5	39.1	24.0	20.8	26.2	22.4	17.5	6.6	0.9
SUR	781.4	27.3	33.0	14.9	25.8	29.8	20.3	16.6	8.8	0.9
ANDALUCIA	784.2	27.5	33.3	14.6	26.8	30.1	21.1	16.0	9.2	0.8
MURCIA	772.3	26.2	30.6	16.3	20.6	29.1	16.0	21.3	6.1	0.8
CEUTA Y MELILLA	700.7	24.3	38.9	17.8	13.0	18.7	11.4	10.5	4.9	4.9
CANARIAS	687.3	19.6	28.4	16.6	34.5	21.5	18.4	16.2	8.2	0.6
<b>FRANCE</b>	<b>934.0</b>	<b>40.5</b>	<b>37.7</b>	<b>19.3</b>	<b>11.8</b>	<b>34.5</b>	<b>19.6</b>	<b>17.7</b>	<b>20.7</b>	<b>1.0</b>
ÎLE DE FRANCE	757.4	32.3	35.1	18.9	7.6	26.2	16.8	11.3	12.7	0.8
BASSIN PARISIEN	955.2	42.7	38.9	19.4	12.1	34.7	20.9	20.6	26.2	1.0
CHAMPAGNE-ARDENNE	920.2	37.1	40.6	17.2	11.7	37.2	21.7	20.7	22.6	0.9
PICARDIE	925.1	36.7	39.7	17.5	13.0	33.4	20.8	20.5	26.8	1.2
HAUTE-NORMANDIE	892.6	41.4	40.1	20.5	10.8	35.1	25.7	18.2	28.1	1.5
CENTRE	975.9	44.0	38.0	19.6	11.8	32.9	18.0	22.8	25.4	1.0
BASSE-NORMANDIE	918.2	47.0	31.3	20.8	8.9	31.9	17.9	19.2	31.7	0.6
BOURGOGNE	1085.8	49.7	42.8	20.8	15.9	38.5	21.8	21.3	22.9	0.4
NORD-PAS-DE-CALAIS	951.2	38.2	42.7	20.5	14.5	33.6	33.2	11.4	23.9	1.4
EST	890.3	39.3	41.7	17.7	13.0	36.0	20.0	16.6	18.2	0.8
LORRAINE	883.8	39.3	48.2	17.5	12.0	32.7	22.1	15.9	16.6	0.6
ALSACE	901.7	41.1	36.8	19.2	14.3	41.9	19.3	15.2	18.5	1.1
FRANCHE-COMTE	887.4	36.8	35.2	16.1	13.3	34.2	16.3	20.4	21.1	0.7

**Table 3 : Mortality rate by cause (per 100 000 inhabitants) - 1988 (continued)**

	Total	Malignant tumours			Diabetes mellitus	Pneu- monia, bronchitis, emphy- sema, asthma	Chronic liver disease and cirrhosis	Motor vehicle accidents	Suicide and self-inflicted injury	Homicide
		of the stomach, intestine and rectum	of the trachea, bronchus and lung	of the breast and cervix uteri						
OUEST	954.9	44.8	29.4	18.4	8.7	36.9	21.8	19.9	28.1	0.8
PAYS DE LA LOIRE	852.5	38.8	26.2	18.2	8.0	31.7	21.0	19.5	24.5	0.9
BRETAGNE	1025.0	49.5	30.4	18.0	7.7	43.2	23.9	19.6	33.7	0.6
POITOU-CHARENTES	1030.4	48.3	34.1	19.7	11.8	35.9	19.5	21.2	25.5	1.0
SUD-OUEST	1094.9	47.6	39.0	20.6	16.5	40.5	16.0	22.0	19.0	0.7
AQUITAINE	1072.4	47.5	41.8	21.9	17.0	37.7	17.5	23.0	20.7	0.7
MIDI-PYRENEES	1054.4	41.3	35.9	18.2	15.9	39.9	12.5	22.0	14.5	0.5
LIMOUSIN	1310.1	68.7	38.9	23.2	16.4	53.4	21.4	18.0	27.0	1.4
CENTRE-EST	912.4	39.8	35.0	18.7	11.9	35.5	18.3	18.5	19.6	0.9
RHÔNE-ALPES	854.8	37.8	35.0	18.3	11.0	34.4	17.3	18.0	18.5	1.1
AUVERGNE	1139.3	47.7	35.1	20.3	15.5	39.5	22.5	20.4	24.0	0.5
MEDITERRANEE	1059.7	41.5	45.3	20.6	14.8	37.8	16.0	21.2	18.9	1.7
LANGUEDOC-ROUSSILLON	1082.4	41.6	43.2	20.5	17.6	44.6	14.5	26.4	19.6	2.4
PROVENCE-ALPES-CÔTE D'AZUR	1045.1	41.3	46.0	20.7	13.5	35.1	16.9	18.5	19.1	1.4
CORSE	1115.4	44.5	49.8	21.0	13.4	27.9	15.0	22.3	8.5	2.0
DEPARTEMENTS D'OUTRE-MER	186.1	4.0	4.9	2.8	1.5	3.4	2.6	18.0	2.3	0.5
<b>IRELAND</b>	<b>892.6</b>	<b>41.6</b>	<b>43.7</b>	<b>19.4</b>	<b>11.4</b>	<b>50.8</b>	<b>3.0</b>	<b>13.0</b>	<b>7.5</b>	<b>0.8</b>
<b>ITALIA</b>	<b>935.1</b>	<b>49.6</b>	<b>51.1</b>	<b>19.2</b>	<b>31.8</b>	<b>44.5</b>	<b>28.4</b>	<b>15.2</b>	<b>7.6</b>	<b>1.8</b>
NORD OVEST	1178.8	61.3	64.8	26.0	30.6	51.7	28.2	16.5	10.9	0.8
PIEMONTE	1132.0	58.9	61.0	24.8	27.5	51.5	27.5	18.3	11.3	1.0
VALLE D'AOSTA	1079.1	50.6	55.0	21.8	21.8	47.1	34.9	24.4	16.6	1.7
LIGURIA	1302.7	68.1	75.1	29.5	38.7	52.6	29.4	11.4	9.5	0.3
LOMBARDIA	936.2	60.2	62.4	23.5	25.2	39.4	29.8	17.4	7.4	1.0
NORD EST	975.6	53.3	64.4	22.2	26.2	45.2	29.7	19.6	9.3	0.5
TRENTINO-ALTO ADIGE	905.0	53.9	46.5	21.3	20.2	41.8	27.9	15.7	10.0	0.3
VENETO	920.9	48.8	65.0	21.5	26.3	42.6	27.6	20.3	8.4	0.4
FRIULI-VENEZIA GIULIA	1225.4	69.1	75.5	25.5	30.3	56.8	38.8	19.7	12.2	1.0
EMILIA-ROMAGNA	1094.1	77.9	68.4	24.4	25.4	44.0	23.8	23.1	12.8	0.8
CENTRO	1064.5	73.2	55.6	19.8	30.4	51.5	20.9	17.0	8.7	0.8
TOSCANA	1105.4	75.8	60.9	20.9	29.8	48.0	21.6	16.3	8.6	0.7
UMBRIA	1038.1	67.8	44.8	21.0	31.0	60.1	26.7	15.6	10.0	0.5
MARCHE	977.8	69.6	48.6	16.2	31.4	55.2	16.0	19.4	8.2	1.0
LAZIO	847.3	44.4	50.1	18.9	34.8	36.4	23.7	15.2	5.9	0.9
CAMPANIA	768.5	24.1	37.2	10.9	35.5	43.7	40.3	8.6	3.7	3.0
ABRUZZI-MOLISE	946.1	44.0	32.5	15.2	37.4	48.3	29.7	13.5	5.9	0.8
ABRUZZI	939.0	44.7	33.7	15.8	37.8	47.2	31.1	13.9	6.0	0.8
MOLISE	972.7	41.2	27.8	13.1	35.8	52.2	24.5	12.2	5.7	0.9
SUD	768.1	29.9	33.3	13.7	35.6	46.0	29.5	11.7	4.8	4.3
PUBLIA	733.3	24.9	37.5	15.6	35.3	49.0	29.6	13.4	4.7	2.5
BASILICATA	880.3	36.5	27.2	12.4	36.3	52.1	35.4	11.7	6.6	1.4
CALABRIA	801.1	37.5	27.1	10.5	36.0	38.5	27.5	8.4	4.4	8.5
SICILIA	862.4	32.3	31.1	14.5	44.5	44.7	25.5	9.3	6.5	4.8
SARDEGNA	777.4	29.7	35.9	16.6	31.9	36.5	28.4	15.2	8.5	2.4
<b>LUXEMBOURG (GRAND-DUCHE)</b>	<b>1046.6</b>	<b>49.0</b>	<b>59.2</b>	<b>26.8</b>	<b>12.9</b>	<b>39.4</b>	<b>20.1</b>	<b>24.1</b>	<b>18.5</b>	<b>1.3</b>
<b>NEDERLAND</b>	<b>841.3</b>	<b>43.1</b>	<b>59.0</b>	<b>22.3</b>	<b>24.5</b>	<b>36.6</b>	<b>5.2</b>	<b>8.9</b>	<b>10.4</b>	<b>0.9</b>
NOORD-NEDERLAND	923.4	49.5	60.3	23.9	27.1	38.4	4.5	12.4	12.1	0.8
GRONINGEN	947.6	54.5	63.5	21.8	27.7	38.7	5.6	11.9	12.1	1.4
FRIESLAND	943.7	47.2	57.1	26.0	29.7	39.9	3.5	12.7	11.3	0.8
DRENTHE	865.0	46.1	60.7	23.5	22.8	36.1	4.3	12.6	13.2	0.0
OOST-NEDERLAND	813.5	42.6	58.2	21.5	24.6	36.3	5.4	10.1	9.1	0.7
OVERIJSEL	844.3	44.6	56.1	21.8	28.2	39.7	6.1	10.7	9.0	0.5
GELDERLAND	837.7	44.0	61.5	22.4	24.2	36.9	5.2	10.0	9.4	0.9
FLEVOLAND	437.4	19.7	38.8	12.1	10.1	13.6	3.0	8.6	7.1	0.5

**Table 3 : Mortality rate by cause (per 100 000 inhabitants) - 1988 (continued)**

	Total	Malignant tumours			Diabetes mellitus	Pneu- monia, bronchitis, emphy- sema, asthma	Chronic liver disease and cirrhosis	Motor vehicle accidents	Suicide and self-inflicted injury	Homicide
		of the stomach, intestine, and rectum	of the trachea, bronchus and lung	of the breast and cervix uteri						
<b>WEST-NEDERLAND</b>	<b>877.5</b>	<b>43.1</b>	<b>59.4</b>	<b>23.6</b>	<b>23.7</b>	<b>38.0</b>	<b>5.4</b>	<b>7.1</b>	<b>10.4</b>	<b>1.0</b>
UTRECHT	804.5	41.0	55.4	21.6	22.4	34.1	5.3	8.2	9.8	0.7
NOORD-HOLLAND	902.2	42.3	60.8	24.5	23.1	41.8	5.5	6.2	12.1	1.0
ZUID-HOLLAND	873.0	42.9	60.5	23.3	24.4	36.8	5.4	6.9	9.2	1.2
ZEELAND	952.9	55.7	50.3	25.3	24.5	34.3	4.8	11.8	10.7	0.6
ZUID-NEDERLAND	749.9	40.6	58.3	19.3	24.8	33.2	5.0	10.0	10.5	0.8
NOORD-BRABANT	717.9	40.4	55.5	18.0	23.7	30.5	4.2	10.7	9.6	0.6
LIMBURG	813.2	41.0	63.9	21.8	27.2	38.5	6.6	8.7	12.2	1.2
<b>PORTUGAL</b>	<b>989.0</b>	<b>48.7</b>	<b>20.6</b>	<b>14.8</b>	<b>22.1</b>	<b>41.3</b>	<b>28.3</b>	<b>28.0</b>	<b>8.3</b>	<b>1.4</b>
CONTINENTE	984.8	49.7	20.2	14.8	20.9	41.0	28.5	28.7	8.5	1.4
NORTE	873.0	46.1	18.8	10.7	16.4	40.8	29.1	21.6	2.9	1.2
CENTRO	1130.8	50.8	17.1	13.0	22.7	40.9	34.1	42.3	7.0	0.8
LISBOA E VALE DO TEJO	949.6	49.9	21.5	19.2	22.5	41.5	27.9	24.9	12.4	1.6
ALENTEJO	1286.7	65.4	24.9	15.9	31.5	37.5	16.8	35.5	16.4	1.8
ALGARVE	1226.7	52.3	29.1	20.8	25.8	45.8	19.9	55.9	23.2	3.6
AÇORES	1135.5	32.5	35.0	17.9	50.5	42.5	26.3	17.9	5.4	0.4
MADEIRA	1006.3	28.3	22.4	13.8	39.4	49.2	22.4	15.3	1.6	2.0
<b>UNITED KINGDOM</b>	<b>1137.6</b>	<b>52.7</b>	<b>70.5</b>	<b>30.6</b>	<b>14.7</b>	<b>77.0</b>	<b>5.8</b>	<b>9.2</b>	<b>:</b>	<b>1.0</b>
NORTH	1233.8	59.2	92.4	29.0	14.8	75.8	5.9	7.7	:	0.4
YORKSHIRE AND HUMBERSIDE	1174.6	54.0	76.3	28.8	14.9	75.9	4.9	9.2	:	0.4
EAST MIDLANDS	1096.4	50.6	66.4	32.0	15.6	65.9	4.2	10.0	:	0.5
EAST ANGLIA	1089.0	52.8	60.7	30.0	16.2	68.8	4.6	13.5	:	0.4
SOUTH EAST	1063.7	47.9	65.9	30.2	15.0	74.9	5.8	8.4	:	0.7
SOUTHWEST	1190.0	56.2	61.4	35.4	17.8	73.3	5.2	9.4	:	0.3
WEST MIDLANDS	1097.3	55.5	66.0	30.5	18.5	71.8	5.1	8.2	:	0.4
NORTH WEST	1218.1	55.0	80.4	31.5	13.9	81.5	6.3	8.9	:	1.0
WALES	1189.4	61.9	68.6	34.0	14.5	76.4	5.7	6.5	:	0.9
SCOTLAND	1216.6	52.6	81.4	28.5	9.8	86.4	8.4	11.0	:	3.2
NORTHERN IRELAND	1002.0	44.9	49.2	22.4	2.9	121.2	3.7	14.6	:	6.8



## METHODS AND DEFINITIONS

This analysis is based on the **initial cause of death** (section b of the death certificate). Causes of death are defined on the basis of the World Health Organization's International Classification of Diseases. With the exception of Denmark (8th revision), all European Community countries use the ninth revision of the Classification.

However, there could be a difference in the statistics for the cause of deaths from one country to another resulting from the doctor's diagnostic classification, when the cause of death is multiple or difficult to evaluate.

**"Perinatal diseases"** are classified under the heading "diseases originating in the perinatal period" and include infant mortalities during delivery and seven days after birth.

The heading **"diseases of the circulatory system"** includes acute myocardial infarctions and other ischaemic cardiopathies, cerebrovascular diseases, atherosclerosis and diseases of other parts of the circulatory system. Ischaemia is the localized stoppage of the blood supply.

**"Ill-defined symptoms, signs and other morbid states"** comprise the category of undetermined causes.

The **proportional mortality ratio** is the ratio of the number of deaths from a specific cause to the total number of deaths, expressed as a percentage (figures 1 and 2).

The **male excess mortality index** is the ratio of male deaths to female deaths.

The **infant mortality rate** is the number of deaths of infants aged under one year per thousand live births.

The **crude mortality rate** (or mortality rate) is the ratio of the number of deaths for a given year to the average population for that year.

The **mortality rate by cause** is the ratio of deaths for a given calendar year and a given cause of death to the average population for that year.

The mortality rate is affected by the **age structure** of the population. This bias can be corrected, at least partially, by using a standard population. The **standardized death rate** is thus a modified mortality rate, which allows a comparison to be made between countries and sex. In this case (table 2), the population-type to which we refer is the structure by age of the region of Europe, defined by WHO.

### SYMBOLS USED

- \* Eurostat estimate
- : Not available
- Zero

### SOURCES

Eurostat: Demographic Statistics Yearbook  
REGIO database

WHO: Yearbook of world health statistics  
WHO database

INFORMATION :

Viviane BURGUNDER

Tel. : 4301-33209

Tel. : 40 86 61-29